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1 [Industrial session: query processing and optimization: An efficient SQL-based RDF querying scheme](#)

Eugene Inseok Chong, Souripriya Das, George Eadon, Jagannathan Srinivasan

 August 2005 **Proceedings of the 31st international conference on Very large data bases VLDB '05**

Publisher: VLDB Endowment

 Full text available: [pdf\(178.24 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Devising a scheme for efficient and scalable querying of Resource Description Framework (RDF) data has been an active area of current research. However, most approaches define new languages for querying RDF data, which has the following shortcomings: 1) They are difficult to integrate with SQL queries used in database applications, and 2) They incur inefficiency as data has to be transformed from SQL to the corresponding language data format. This paper proposes a SQL based scheme that avoids th ...

2 [Fast detection of communication patterns in distributed executions](#)

Thomas Kunz, Michiel F. H. Seuren

 November 1997 **Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative research**

Publisher: IBM Press

 Full text available: [pdf\(4.21 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on process-time diagrams are often used to obtain a better understanding of the execution of the application. The visualization tool we use is Poet, an event tracer developed at the University of Waterloo. However, these diagrams are often very complex and do not provide the user with the desired overview of the application. In our experience, such tools display repeated occurrences of non-trivial commun ...

3 [APL2 and SQL \(tutorial session\): a tutorial](#)



Nancy Wheeler

 August 1989 **Proceedings of the ACM/SIGAPL conference on APL as a tool of thought (session tutorials)**

Publisher: ACM Press

 Full text available: [pdf\(1.97 MB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

4 Computing curricula 2001



September 2001 **Journal on Educational Resources in Computing (JERIC)**

Publisher: ACM Press

Full text available: pdf(613.63 KB)

html(2.78 KB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

5 Supporting valid-time indeterminacy



Curtis E. Dyreson, Richard Thomas Snodgrass

March 1998 **ACM Transactions on Database Systems (TODS)**, Volume 23 Issue 1

Publisher: ACM Press

Full text available: pdf(516.09 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In valid-time indeterminacy it is known that an event stored in a database did in fact occur, but it is not known exactly when. In this paper we extend the SQL data model and query language to support valid-time indeterminacy. We represent the occurrence time of an event with a set of possible instants, delimiting when the event might have occurred, and a probability distribution over that set. We also describe query language constructs to retrieve informat ...

Keywords: SQL, TSQL2, incomplete information, indeterminacy, probabilistic information, temporal database, valid-time database

6 Extensions to Starburst: objects, types, functions, and rules



Guy M. Lohman, Bruce Lindsay, Hamid Pirahesh, K. Bernhard Schiefer

October 1991 **Communications of the ACM**, Volume 34 Issue 10

Publisher: ACM Press

Full text available: pdf(5.21 MB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: Extended relational database management systems, Starburst, extensible database management systems

7 Technical reports



SIGACT News Staff

January 1980 **ACM SIGACT News**, Volume 12 Issue 1

Publisher: ACM Press

Full text available: pdf(5.28 MB)

Additional Information: [full citation](#)

8 Federated database systems for managing distributed, heterogeneous, and autonomous databases



Amit P. Sheth, James A. Larson

September 1990 **ACM Computing Surveys (CSUR)**, Volume 22 Issue 3

Publisher: ACM Press

Full text available: pdf(5.02 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

A federated database system (FDBS) is a collection of cooperating database systems that are autonomous and possibly heterogeneous. In this paper, we define a reference

architecture for distributed database management systems from system and schema viewpoints and show how various FDBS architectures can be developed. We then define a methodology for developing one of the popular architectures of an FDBS. Finally, we discuss critical issues related to developing and operating an FDBS.

9 Industrial sessions: database internals - II: Hosting the .NET Runtime in Microsoft



SQL server

Alazel Acheson, Mason Bendixen, José A. Blakeley, Peter Carlin, Ebru Ersan, Jun Fang, Xiaowei Jiang, Christian Kleiner, Balaji Rathakrishnan, Gideon Schaller, Beysim Sezgin, Ramachandran Venkatesh, Honggang Zhang

June 2004 **Proceedings of the 2004 ACM SIGMOD international conference on Management of data**

Publisher: ACM Press

Full text available: pdf(249.27 KB) Additional Information: [full citation](#), [abstract](#), [references](#)

The integration of the .NET Common Language Runtime (CLR) inside the SQL Server DBMS enables database programmers to write business logic in the form of functions, stored procedures, triggers, data types; and aggregates using modern programming languages such as C#, Visual Basic, C++, COBOL, and J++. This paper presents three main aspects of this work. First, it describes the architecture of the integration of the CLR inside the SQL Server database process to provide a safe, scalable, secure, an ...

10 Information gathering in the World-Wide Web: the W3QL query language and the



W3QS system

David Konopnicki, Oded Shmueli

December 1998 **ACM Transactions on Database Systems (TODS)**, Volume 23 Issue 4

Publisher: ACM Press

Full text available: pdf(1.36 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The World Wide Web (WWW) is a fast growing global information resource. It contains an enormous amount of information and provides access to a variety of services. Since there is no central control and very few standards of information organization or service offering, searching for information and services is a widely recognized problem. To some degree this problem is solved by "search services," also known as "indexers," such as Lycos, AltaVista, Yahoo, and others.

Keywords: CGI, FORMS, HTML, HTTP, PERL, World-Wide Web, query language, query system

11 SilkRoute: A framework for publishing relational data in XML



Mary Fernández, Yana Kadiyska, Dan Suciu, Atsuyuki Morishima, Wang-Chiew Tan

December 2002 **ACM Transactions on Database Systems (TODS)**, Volume 27 Issue 4

Publisher: ACM Press

Full text available: pdf(687.91 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


XML is the "lingua franca" for data exchange between interenterprise applications. In this work, we describe SilkRoute, a framework for publishing relational data in XML. In SilkRoute, relational data is published in three steps: the relational tables are presented to the database administrator in a canonical XML view; the database administrator defines in the XQuery query language a public, virtual XML view over the canonical XML view; and an application formulates an XQuery query over the publ ...

Keywords: XML, XML storage systems, XQuery

12 Object orientation in multidatabase systems

Evaggelia Pitoura, Omran Bukhres, Ahmed Elmagarmid
June 1995 **ACM Computing Surveys (CSUR)**, Volume 27 Issue 2

Publisher: ACM Press

Full text available:  [pdf\(4.85 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)


A multidatabase system (MDBS) is a confederation of preexisting distributed, heterogeneous, and autonomous database systems. There has been a recent proliferation of research suggesting the application of object-oriented techniques to facilitate the complex task of designing and implementing MDBSs. Although this approach seems promising, the lack of a general framework impedes any further development. The goal of this paper is to provide a concrete analysis and categorization of the various ...

Keywords: distributed objects, federated databases, integration, multidatabases, views

13 A structured approach for the definition of the semantics of active databases

Piero Fraternali, Letizia Tanca
December 1995 **ACM Transactions on Database Systems (TODS)**, Volume 20 Issue 4

Publisher: ACM Press

Full text available:  [pdf\(4.15 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)


Active DBMSs couple database technology with rule-based programming to achieve the capability of reaction to database (and possibly external) stimuli, called events. The reactive capabilities of active databases are useful for a wide spectrum of applications, including security, view materialization, integrity checking and enforcement, or heterogeneous database integration, which makes this technology very promising for the near future. An active database system consists of ...

Keywords: active database systems, database rule processing, events, fixpoint semantics, rules, semantics

14 SchemaSQL: An extension to SQL for multidatabase interoperability

Laks V. S. Lakshmanan, Fereidoon Sadri, Subbu N. Subramanian
December 2001 **ACM Transactions on Database Systems (TODS)**, Volume 26 Issue 4

Publisher: ACM Press

Full text available:  [pdf\(435.89 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

We provide a principled extension of SQL, called *SchemaSQL*, that offers the capability of uniform manipulation of data and schema in relational multidatabase systems. We develop a precise syntax and semantics of *SchemaSQL* in a manner that extends traditional SQL syntax and semantics, and demonstrate the following. (1) *SchemaSQL* retains the flavor of SQL while supporting querying of both data and schema. (2) It can be used to transform data in a database in a structure substa ...

Keywords: Information integration, SchemaSQL, multidatabase systems, restructuring views, schematic heterogeneity

15

Invited Tutorial 1: Context-sensitive program analysis as database queries


Monica S. Lam, John Whaley, V. Benjamin Livshits, Michael C. Martin, Dzintars Avots, Michael

-  Carbin, Christopher Unkel
June 2005 **Proceedings of the twenty-fourth ACM SIGMOD-SIGACT-SIGART symposium on Principles of database systems**

Publisher: ACM Press


Full text available:  pdf(183.53 KB) Additional Information: [full citation](#), [abstract](#), [references](#)

Program analysis has been increasingly used in software engineering tasks such as auditing programs for security vulnerabilities and finding errors in general. Such tools often require analyses much more sophisticated than those traditionally used in compiler optimizations. In particular, context-sensitive pointer alias information is a prerequisite for any sound and precise analysis that reasons about uses of heap objects in a program. Context-sensitive analysis is challenging because ...

- 16 Frontmatter (TOC, Letters, Election results, Software Reliability Resources!, Computing Curricula 2004 and the Software Engineering Volume SE2004, Software Reuse Research, ICSE 2005 Forward) 

July 2005 **ACM SIGSOFT Software Engineering Notes**, Volume 30 Issue 4

Publisher: ACM Press

Full text available:  pdf(6.19 MB) Additional Information: [full citation](#)

- 17 Multidatabase systems: Engineering an SQL gateway to IMS 

G. N. Paulley

October 1993 **Proceedings of the 1993 conference of the Centre for Advanced Studies on Collaborative research: distributed computing - Volume 2**

Publisher: IBM Press

Full text available:  pdf(1.18 MB) Additional Information: [full citation](#), [abstract](#), [references](#)

Multidatabase systems enable organizations to integrate legacy database systems, and their applications, with newer database technology. One such legacy system is IBM'S Information Management System (IMS), a hierarchical database management system developed in the 1960s. Commercial IMS gateways typically suffer from poor performance and lack essential features needed to support updates. In this paper, we outline the engineering issues of constructing a multi-user IMS gateway that supports both c ...

- 18 Accessing relational databases from the World Wide Web 


Tam Nguyen, V. Srinivasan

June 1996 **ACM SIGMOD Record , Proceedings of the 1996 ACM SIGMOD international conference on Management of data SIGMOD '96**, Volume 25 Issue 2

Publisher: ACM Press

Full text available:  pdf(1.45 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)


With the growing popularity of the internet and the World Wide Web (Web), there is a fast growing demand for access to database management systems (DBMS) from the Web. We describe here techniques that we invented to bridge the gap between HTML, the standard markup language of the Web, and SQL, the standard query language used to access relational DBMS. We propose a flexible general purpose variable substitution mechanism that provides cross-language variable substitution between HTML input and S ...

- 19 The model-assisted global query system for multiple databases in distributed enterprises 

Waiman Cheung, Cheng Hsu

October 1996 **ACM Transactions on Information Systems (TOIS)**, Volume 14 Issue 4

Publisher: ACM Press

Full text available:  [pdf\(697.73 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Today's enterprises typically employ multiple information systems, which are independently developed, locally administered, and different in logical or physical designs. Therefore, a fundamental challenge in enterprise information management is the sharing of information for enterprise users across organizational boundaries; this requires a global query system capable of providing on-line intelligent assistance to users. Conventional technologies, such as schema-based query languages and ha ...

20 Industrial session: data warehousing and data mining: Bridging the gap between OLAP and SQL

Jens-Peter Dittrich, Donald Kossmann, Alexander Kreutz

August 2005 **Proceedings of the 31st international conference on Very large data bases VLDB '05**

Publisher: VLDB Endowment

Full text available:  [pdf\(409.18 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In the last ten years, database vendors have invested heavily in order to extend their products with new features for decision support. Examples of functionality that has been added are top N [2], ranking [13, 7], spreadsheet computations [19], grouping sets [14], data cube [9], and moving sums [15] in order to name just a few. Unfortunately, many modern OLAP systems do not use that functionality or replicate a great deal of it in addition to other database-related functionality. In fact, the ga ...

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1 [Eliminating costly redundant computations from SQL trigger executions](#)



François Llirbat, Françoise Fabret, Eric Simon

 June 1997 **ACM SIGMOD Record , Proceedings of the 1997 ACM SIGMOD international conference on Management of data SIGMOD '97**, Volume 26 Issue 2

Publisher: ACM Press

Full text available: pdf(1.66 MB)

 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Active database systems are now in widespread use. The use of triggers in these systems, however, is difficult because of the complex interaction between triggers, transactions, and application programs. Repeated calculations of rules may incur costly redundant computations in rule conditions and actions. In this paper, we focus on active relational database systems supporting SQL triggers. In this context, we provide a powerful and complete solution to eliminate redundant computations of S ...

2 [Semantic integrity support in SQL:1999 and commercial \(object-\)relational database management systems](#)



Can Türker, Michael Gertz

 December 2001 **The VLDB Journal — The International Journal on Very Large Data Bases**, Volume 10 Issue 4

Publisher: Springer-Verlag New York, Inc.

 Full text available: pdf(345.55 KB) Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

The correctness of the data managed by database systems is vital to any application that utilizes data for business, research, and decision-making purposes. To guard databases against erroneous data not reflecting real-world data or business rules, semantic integrity constraints can be specified during database design. Current commercial database management systems provide various means to implement mechanisms to enforce semantic integrity constraints at database run-time. In this paper, we give ...

Keywords: Constraint enforcement, Object-relational databases, SQL:1999, Semantic integrity constraints

3 [A structured approach for the definition of the semantics of active databases](#)



Piero Fraternali, Letizia Tanca

 December 1995 **ACM Transactions on Database Systems (TODS)**, Volume 20 Issue 4

Publisher: ACM Press

Full text available:  [pdf\(4.15 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Active DBMSs couple database technology with rule-based programming to achieve the capability of reaction to database (and possibly external) stimuli, called events. The reactive capabilities of active databases are useful for a wide spectrum of applications, including security, view materialization, integrity checking and enforcement, or heterogeneous database integration, which makes this technology very promising for the near future. An active database system consists of ...

Keywords: active database systems, database rule processing, events, fixpoint semantics, rules, semantics

4 [An algebraic approach to static analysis of active database rules](#)



Elena Baralis, Jennifer Widom

September 2000 **ACM Transactions on Database Systems (TODS)**, Volume 25 Issue 3

Publisher: ACM Press

Full text available:  [pdf\(391.93 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Rules in active database systems can be very difficult to program due to the unstructured and unpredictable nature of rule processing. We provide static analysis techniques for predicting whether a given rule set is guaranteed to terminate and whether rule execution is confluent (guaranteed to have a unique final state). Our methods are based on previous techniques for analyzing rules in active database systems. We improve considerably on the previous techniques by providing analysis criterion ...

Keywords: active database systems, confluence, database rule processing, database trigger processing, termination

5 [Using a relational system on Wall Street: the good, the bad, the ugly, and the ideal](#)



Steve Rozen, Dennis Shasha

August 1989 **Communications of the ACM**, Volume 32 Issue 8

Publisher: ACM Press

Full text available:  [pdf\(828.73 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Developers of a Wall Street financial application were able to exploit a relational DBMS to advantage for some data management tasks (the good). For others, the relational system was not helpful (the bad), or could be pressed into service only by means of major or minor contortions (the ugly). The authors identify database constructs that would have simplified developing the application (the ideal).

6 [Client-server computing](#)



Alok Sinha

July 1992 **Communications of the ACM**, Volume 35 Issue 7

Publisher: ACM Press

Full text available:  [pdf\(7.53 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#), [review](#)

Keywords: client-server computing

7 Using Applications of Data Versioning in Database Application Development

Ramkrishna Chatterjee, Gopalan Arun, Sanjay Agarwal, Ben Speckhard, Ramesh Vasudevan
May 2004 **Proceedings of the 26th International Conference on Software Engineering**

Publisher: IEEE Computer Society

Full text available:  [pdf\(166.57 KB\)](#) Additional Information: [full citation](#), [abstract](#)

Database applications such as enterprise resource planning systems and customer relationship management systems are widely used software systems. Development and testing of database applications is difficult because the program execution depends on the persistent state stored in the database. In this paper we show that how versioning of the persistent data stored in the database can solve some critical problems in the development and testing of database applications can be solved by vers ...

8 Industrial sessions: database internals - II: Hosting the .NET Runtime in Microsoft SQL server

Alazel Acheson, Mason Bendixen, José A. Blakeley, Peter Carlin, Ebru Ersan, Jun Fang, Xiaowei Jiang, Christian Kleinerman, Balaji Rathakrishnan, Gideon Schaller, Beysim Sezgin, Ramachandran Venkatesh, Honggang Zhang

June 2004 **Proceedings of the 2004 ACM SIGMOD international conference on Management of data**

Publisher: ACM Press

Full text available:  [pdf\(249.27 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

The integration of the .NET Common Language Runtime (CLR) inside the SQL Server DBMS enables database programmers to write business logic in the form of functions, stored procedures, triggers, data types, and aggregates using modern programming languages such as C#, Visual Basic, C++, COBOL, and J++. This paper presents three main aspects of this work. First, it describes the architecture of the integration of the CLR inside the SQL Server database process to provide a safe, scalable, secure, an ...

9 Extensions to Starburst: objects, types, functions, and rules

Guy M. Lohman, Bruce Lindsay, Hamid Pirahesh, K. Bernhard Schiefer
October 1991 **Communications of the ACM**, Volume 34 Issue 10

Publisher: ACM Press

Full text available:  [pdf\(5.21 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)


Keywords: Extended relational database management systems, Starburst, extensible database management systems

10 Context-based prefetch – an optimization for implementing objects on relations

Philip A. Bernstein, Shankar Pal, David Shutt

December 2000 **The VLDB Journal – The International Journal on Very Large Data Bases**, Volume 9 Issue 3

Publisher: Springer-Verlag New York, Inc.

Full text available:  [pdf\(142.24 KB\)](#) Additional Information: [full citation](#), [abstract](#), [index terms](#)

When implementing persistent objects on a relational database, a major performance issue is prefetching data to minimize the number of round-trips to the database. This is especially hard with navigational applications, since future accesses are unpredictable. We propose the use of the context in which an object is loaded as a predictor of future accesses, where a context can be a stored collection of relationships, a query result, or a complex object. When an object O's state is loaded, similar ...

Keywords: Caching, Object-oriented database, Object-relational mapping, Prefetch

11 SQL+D: extended display capabilities for multimedia database queries



Chitta Baral, Graciela Gonzalez, Amarendra Nandigam

September 1998 **Proceedings of the sixth ACM international conference on Multimedia**

Publisher: ACM Press

Full text available: [pdf\(717.13 KB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

12 A publish/subscribe CORBA persistent state service prototype



C. Liebig, M. Cilia, M. Betz, A. Buchmann

April 2000 **IFIP/ACM International Conference on Distributed systems platforms**

Publisher: Springer-Verlag New York, Inc.

Full text available: [pdf\(283.92 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

An important class of information dissemination applications requires 1:n communication and access to persistent datastores. CORBA's new Persistent State Service combined with messaging capabilities offer the possibility of efficiently realizing information brokers between data sources and CORBA clients. In this paper we present a prototype implementation of the PSS that exploits the reliable multicast capabilities of an existing middleware platform. This publish/subscribe architecture makes ...

13 Heterogeneous distributed database systems for production use



Gomer Thomas, Glenn R. Thompson, Chin-Wan Chung, Edward Barkmeyer, Fred Carter, Marjorie Templeton, Stephen Fox, Berl Hartman

September 1990 **ACM Computing Surveys (CSUR)**, Volume 22 Issue 3

Publisher: ACM Press

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It is increasingly important for organizations to achieve additional coordination of diverse computerized operations. To do so, it is necessary to have database systems that can operate over a distributed network and can encompass a heterogeneous mix of computers, operating systems, communications links, and local database management systems. This paper outlines approaches to various aspects of heterogeneous distributed data management and describes the characteristics and architectures of ...

14 Specification and implementation of exceptions in workflow management systems



Fabio Casati, Stefano Ceri, Stefano Paraboschi, Guiseppe Pozzi

September 1999 **ACM Transactions on Database Systems (TODS)**, Volume 24 Issue 3

Publisher: ACM Press

Full text available: [pdf\(250.40 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Although workflow management systems are most applicable when an organization follows standard business processes and routines, any of these processes faces the need for handling exceptions, i.e., asynchronous and anomalous situations that fall outside the normal control flow. In this paper we concentrate upon anomalous situations that, although unusual, are part of the semantics of workflow applications, and should be specified and monitored coherently; in most real-life applica ...

Keywords: active rules, asynchronous events, exceptions, workflow management systems

15 The impact of object technology on commercial transaction processing

Edward E. Cobb

August 1997 **The VLDB Journal — The International Journal on Very Large Data**

Bases, Volume 6 Issue 3


Publisher: Springer-Verlag New York, Inc.

Full text available:  [pdf\(649.17 KB\)](#) Additional Information: [full citation](#), [abstract](#), [index terms](#)

Businesses today are searching for information solutions that enable them to compete in the global marketplace. To minimize risk, these solutions must build on existing investments, permit the best technology to be applied to the problem, and be manageable. Object technology, with its promise of improved productivity and quality in application development, delivers these characteristics but, to date, its deployment in commercial business applications has been limited. One possible reason is the ...


Keywords: Objects, Workflow, transaction processing

16 Automatic generation of production rules for integrity maintenance

 Stefano Ceri, Piero Fraternali, Stefano Paraboschi, Letizia Tanca

September 1994 **ACM Transactions on Database Systems (TODS)**, Volume 19 Issue 3

Publisher: ACM Press

Full text available:  [pdf\(3.42 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

In this article we present an approach to integrity maintenance, consisting of automatically generating production rules for integrity enforcement. Constraints are expressed as particular formulas of Domain Relational Calculus; they are automatically translated into a set of repair actions, encoded as production rules of an active database system. Production rules may be redundant (they enforce the same constraint in different ways) and conflicting (because repairing one constraint may caus ...


Keywords: automatic generation of production rules

17 Product Review: Raima Database Manager++, Velocis Database Server

Nick Xidis

December 1997 **Linux Journal**

Publisher: Specialized Systems Consultants, Inc.

Full text available:  [html\(9.28 KB\)](#) Additional Information: [full citation](#), [index terms](#)

18 An overview of the emerging third-generation SQL standard

 Jim Melton, Nelson Mendoca Mattos

May 1995 **ACM SIGMOD Record , Proceedings of the 1995 ACM SIGMOD international conference on Management of data SIGMOD '95**, Volume 24 Issue 2

Publisher: ACM Press

Full text available:  [pdf\(107.29 KB\)](#) Additional Information: [full citation](#), [index terms](#)

19 Supporting procedural constructs in existing SQL compilers

Gene Fuh, Jyh-Herng Chow, Nelson Mattos, Brian Tran

November 1996 **Proceedings of the 1996 conference of the Centre for Advanced Studies on Collaborative research**

Publisher: IBM Press

Full text available:  [pdf\(253.25 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The draft of the SQL/PSM standard defines a procedural extension to the existing SQL2 language. An essential part of this extension is the support of procedural constructs such as BEGIN/END blocks, local variables, assignment statements, conditional statements, and various forms of loops. Such an extension introduces new challenges to existing SQL compilers. Most SQL compilers existing in the marketplace today were built based on the declarativeness of SQL. The question is how these procedural extensions ...

20 Set-oriented production rules in relational database systems



Jennifer Widom, S. J. Finkelstein

May 1990 **ACM SIGMOD Record , Proceedings of the 1990 ACM SIGMOD international conference on Management of data SIGMOD '90**, Volume 19 Issue 2

Publisher: ACM Press

Full text available:  [pdf\(1.54 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We propose incorporating a production rules facility into a relational database system. Such a facility allows definition of database operations that are automatically executed whenever certain conditions are met. In keeping with the set-oriented approach of relational data manipulation languages, our production rules are also set-oriented—they are triggered by sets of changes to the database and may perform sets of changes. The condition and action parts of our production rules may r ...

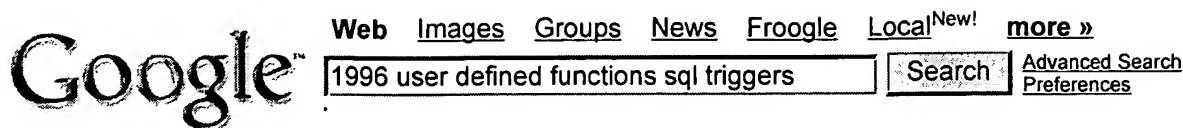
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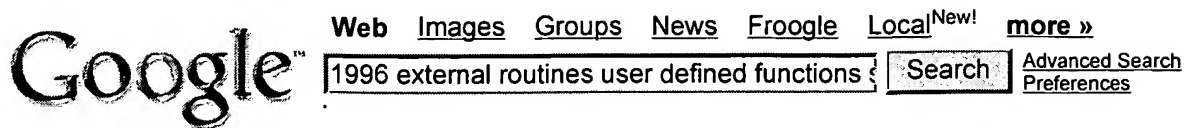


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